

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PING-PEI HO
and ROBERT R. ALFANO

Appeal No. 95-1923
Application 08/051,987¹

ON BRIEF

Before URYNOWICZ, LEE and FLEMING, Administrative Patent Judges.

URYNOWICZ, Administrative Patent Judge.

DECISION ON APPEAL

This appeal is from the final rejection of claim 19, the only claim pending in appellants' application.

The invention pertains to a multiple-stage optical gate. Claim 19 reads as follows:

¹ Application for patent filed April 26, 1993. According to appellants, this application is a division of Application 07/784,220, filed October 30, 1991, now U.S. Patent No. 5,227,912, granted July 13, 1993.

19. A multiple-stage optical gate adapted for use in gating a pulse of light comprising:

(a) a non-linear medium;

(b) first and second polarizers; and

(c) first and second analyzers, said first and second analyzers being crossed relative to said first and second polarizers, respectively, and said second polarizer having a polarization axis parallel to that of said first analyzer, said first and second polarizers and said first and second analyzers being arranged relative to said non-linear medium so that said first polarizer, said non-linear medium and said first analyzer form a first optical gate and said second polarizer, said non-linear medium and said second analyzer form a second optical gate.

The reference relied upon by the examiner is:

Siebert

4,061,985

Dec. 6, 1977

Appealed claim 19 stands rejected under 35 U.S.C. § 102(b) as anticipated by Siebert or, in the alternative, under 35 U.S.C. § 103 as obvious over Siebert.

The respective positions of the examiner and the appellants with regard to the propriety of these rejections are set forth in the final rejection (Paper No. 8) and the examiner's answer (Paper No. 17) and appellants' brief (Paper No. 16) and reply brief (Paper No. 18).

Appellants' Invention

Appellants disclose a device comprising two or more optical gates for use in gating a pulse of light. By successively gating a pulse of light through two or more optical gates, pulses

having a shorter duration and/or a higher signal to noise ratio can be obtained than can typically be obtained using a single stage optical gate. In a two gate embodiment, Kerr gates are configured by arranging a non-linear Kerr cell, first and second polarizers and first and second analyzers so that the first polarizer, the Kerr cell and the first analyzer form a first optical Kerr gate and the second polarizer, the same Kerr cell and the second analyzer form a second optical Kerr gate, the second polarizer having a polarization axis parallel to that of said first analyzer. Appellants' Figs. 8 and 9 illustrate two of appellants' embodiments.

The Prior Art

In his figure, Siebert discloses a pair of optical Kerr cells OKC-1 and OKC-2 and associated alternately crossed polarizers P4, P5 and P6 serially disposed at the output of laser 26, with polarizer P5 disposed between the two Kerr cells.

The Rejection under 35 U.S.C. § 102/103

After consideration of the positions and arguments presented by both the examiner and the appellants, we have concluded that the rejection should not be sustained.

We do not agree with the examiner's position to the effect that the non-linear medium, referred to four times in claim 19, is not a structure but is only a limitation of a type of material

or substance. Even assuming that Siebert's two Kerr cells, OKC-1 and OKC-2, are made of the same type of material, the material physically constituting OKC-1 does not physically constitute OKC-2, and vice-versa. The cells are two separate objects or mediums, even if made of the same material, such that once the material of OKC-1 is identified as said non-linear medium of the first optical gate of claim 19, the material of OKC-2 cannot be later identified as said non-linear medium of the second optical gate of the claim.

Furthermore, Webster's Ninth New Collegiate Dictionary does not appear to support the examiner's position that a medium is a type of material or substance as he contends. The dictionary, in pertinent part, states that a medium is,

2 : a means of effecting or conveying something: as **a** (1): a substance regarded as the means of transmission of a force or effect, . . . **e** : material or technical means of artistic expression.

It is assumed that the examiner was referring to these sections of the definition in urging that medium is only a limitation of a type of material or substance, as only these sections refer to these two terms. With regard to the prior section "**a**", if Siebert's Kerr cell OKC-1 is the means or substance regarded as the means of transmission of electromagnetic energy, then OKC-2

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cannot be regarded as said means or substance. With respect to portion “e” of the definition,
Siebert’s Kerr cells are not a material or technical means of artistic expression.

REVERSED

STANLEY M. URYNOWICZ, JR.)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
LEE E. BARRETT)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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MICHAEL R. FLEMING)	
Administrative Patent Judge)	

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